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ABSTRACT

Based upon a comprehensive approach to educational goal selection, a national sampling of elementary school principals, teachers, and parents was compared over various demographic variables in terms of their goal priorities. The data consisted of the rating of 106 goals by each person sampled in the study. In addition to the goal ratings, each principal also filled out a short questionnaire which investigated the demographic characteristics of his school. The data were school-pupil population, size of school community, racial-ethnic composition of student body, socio-economic composition of school neighborhoods, and geographic region of school. These characteristics were analyzed with the priroity ratings to determine characteristics giving rise to priority differences. The statistical vehicle was a two-way analysis of variance. Surprisingly the demographic variables seemed to have little influence on the priority ratings of the goals. Such information is important for understanding the communication problems among the various constituencies of a school and the reasons for characteristic group pressures.
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DIFFERENTIAL VALUATIONS OF ELEMENTARY EDUCATIONAL GOALS

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Abstract

Based upon a comprehensive approach to educational goal selection, a national sampling of elementary school principals, teachers, and parents was compared over various demographic variables in terms of their goal priorities. The demographic data were school-pupil population, size of school community, racial-ethnic composition of student body, socio-economic composition of school neighborhood, and geographic region of school. These characteristics were analyzed with the priority ratings to determine characteristics giving rise to priority differences. Such information is important for understanding the communication problems among the various constituencies of a school and the reasons for characteristic group pressures.

It has been previously mentioned that the original sample for the field testing of the Elementary School Evaluation KIT: Needs Assessment (Hoepfner, et al., 1970), hereafter referred to as the KIT, really consisted of two parallel samples. One of the samples was composed of 56 California schools, and the second had 43 schools from the rest of the United States. While the combination of these two separate samples would provide the advantageous quality of a large sample size for statistical analyses, it could hardly be said that such a sample was a representative national sample. It was felt that the benefits which could be derived from having a representative national sample outweighted the benefits of a large sample size. The guidelines for what constituted a representative national sample were derived from information from the 1970 census. This information consisted of percentages of the total United States population which could be found in certain geographic areas of the country. The procedure that was employed to align our final sample to these percentages was fairly simple. Given the percentages that were present in the sample from the states other than California, all that remained was to determine how many schools should be taken from California. The result was that six schools taken from the California sample would allow the percentages in this sample to resemble those in the census data. These percentages and the composition of the geographic region can be found in Table 1. It should be mentioned at this juncture that the selection of the six schools from California was not done on a random basis. On the contrary, they were selected so as to increase the sample size of various groups obtained when the analysis of demographic variables were to be performed. For example, two of the schools that were selected had a high percentage

of Mexican-Americans and were in rural areas; later this would be useful in comparisons among neighborhood types and racial-ethnic composition.

Before proceeding to a discussion of the analyses that were performed on the ratings of the goal areas by the groups within these schools, one other thing should be mentioned. While the KIT uses 106 different educational goals to be sorted and rated by the people from the schools, these goals can logically be subordinated to 41 super-goal areas. The ratings for the 41 areas were arrived at by averaging the ratings of the goals which were subordinate to them. For example, the rating for super-goal area 1 was determined by averaging the ratings of goals 1, 2, and 3 which compose it. The advantage of these parallel analyses is that a greater level of generality can be obtained with the results from the 41 goals while specific trends and differences can be found in the data provided by the 106 goals.

Statistical Analysis

The data which were returned from the field test schools consisted of the rating of the 106 goals by each person who was either a principal, teacher, or parent. For each school, and for each group within the school, these ratings were averaged. This resulted in three sets of average ratings on 106 goals for each school. Unfortunately, not all the schools had all three groups participate in the sorting and rating process. The final sample had average ratings from principals of 49 schools, average teacher ratings from 47 schools, and the average parent ratings from 44 schools.

The first and perhaps most important question asked from this data was "Do these three groups differ in the ratings of the educational goals?" The answer to this question was sought through the use of analysis of variance.

The design employed was a simple one-way analysis of variance with three groups. The dependent variables were the set of 106 goal ratings and the set of 41 goal ratings. The results of this analysis can be found in Tables 2 and 3.

The results of the univariate analysis of variance for the 41 goal areas are rather clear. There are 12 analyses that yielded F-ratios that had probabilities of .01 or less. In addition to these there are 4 more F-ratios that have a probability of less than .05. With this many significant F-ratios it would certainly seem that there are indeed different views between principal, teacher, and parent as to the importance of certain educational goals. In addition to the univariate F-ratios, a multivariate analysis of variance was performed on these 41 ratings. This yielded a multivariate F-ratio that was also highly significant. ($p << .0001$).

As can be seen in Table 3, the results of the univariate F-ratios on the 106 goal ratings yielded much the same pattern. There were 22 F-ratios with probability less than .01, and 16 more F-ratios with probability less than .05. Due to limitations in the multivariate computer program it was not possible to perform a multivariate test on the ratings of the entire set of 106 goals.

While the quoting of how many F-ratios are significant is all well and good, just what do these results mean? In order to get a better grasp on the situation, it was necessary to examine the mean ratings of the groups, both for the 41 super-goals and for the 106 individual goals. Looking particularly at those super-goals which yielded significant F-ratios it seemed that an interesting pattern arose. The teachers and principals gave higher mean ratings than did the parents to goals in the affective domain, i.e., Temperament-Personal, Temperament-Social, and Attitudes. It also seemed

that the principals and teachers had a tendency to value more highly goals which called for appreciation of developing an interest in something, thus they rated the goals, Reading Appreciation and Response, Scientific Approach, and Music Appreciation and Interest higher than the parents. The parents on the other hand valued goals such as History and Civics, Foreign Language and Geometry (goals with which they were highly familiar) to a greater extent than the other two groups. It is also interesting to note that while the principals and teachers were uniform in their low ratings of the religious goals, the parents gave these goals a fair amount more importance.

While we have answered the question of whether or not the three groups agree on their ratings of all the individual goals, as yet there has been no examination of concordance of overall ratings and rankings of the entire set of goals. That is, while we know that the groups may disagree as to the actual numerical value assigned to a goal, do they disagree as to its rank and its place amongst all the other goals? The answer to this question was sought by employing correlation analysis.

Specifically, the mean rating and ranking for each of the 41 goals, and also separately for the 106 goals, were correlated for the three groups. The results of this analysis can be found in Tables 4 and 5. It can be seen from the very high values of these correlation coefficients that there is a great deal of consistency in the ratings and rankings of the goals among the three groups. It can also be seen that the principals and teachers tend to rate and rank the goals in a more similar manner than any other pair of the three groups.

Before turning to an examination of possible influences in ratings of the goals due to various demographic variables, I feel that perhaps some summary

of the above results should be made. It would seem that while the three groups may disagree on the rating of a particular goal or goal area, there is still a high degree of agreement on the importance and place of goals when asked to order a complete set of goals. Perhaps there is more harmony between these groups than one would have thought.

In addition to the goal ratings which the schools returned, the principal also filled out a short questionnaire which investigated demographic characteristics of his school. The variables involved were: 1) geographic region of the school, 2) type of neighborhood the school served, 3) racial-ethnic composition of the student body, 4) size of the school, i.e., number of students, and 5) the professional background of the parents. The purpose of acquiring this data was to investigate the possible differences in the priority ratings of the groups defined by these demographic variables. The particular vehicle employed to find these differences was once again analysis of variance. This time however, the design was a two-way analysis of variance. One factor was the demographic variable, while the second factor was group membership, i.e., principal, teacher, or parent. In this way the effect of differences among groups was removed from differences arising from the demographic variables. The ratings for both the 41 and 106 goals were analyzed in this fashion; the F-ratios for the significance test for each of the demographic variables can be found in Tables 6 and 7.

In order to reduce the amount of repetitiveness in the results of the following analyses, only the results of the analyses of the 41 goals will be discussed. This is done since the pattern of significance is basically the same from the analysis of the 106 goals. The results of the analysis of the 106 goals are separated however.

The variable called school size defined three groups: 1) small: less than 400 students, 2) moderate: 400-700 students, and 3) large: more than 700 students. With the 41 goals as dependent variables, there was only one F-ratio with a probability of .01, and only four with probabilities of .05 or less. In each of these cases the large schools had higher mean goal ratings than did the other two school sizes. Perhaps there is more emphasis on subject-matter type courses in larger schools.

The next variable to be examined was type of neighborhood: 1) rural, 2) residential area or suburb of city, 3) small town or city, and 4) inner part of the city. This variable produced four F-ratios that were significant at the .01 level. It seems that residential suburb and inner city schools rated the goals of Creativity, Memory, and Reading Interpretation more highly than the other neighborhood types. For the area of Scientific Processes, the residential suburb schools gave distinctly higher ratings than any other group.

The third demographic variable was racial composition of the student body. This variable was recoded so as to produce two comparisons. The first varied in percentage of minority students, regardless of the type of minority. The second coding resulted in a comparison between schools that were 95% or more White, schools with a substantial percentage of Blacks and third, schools with a large percentage of Mexican-Americans. The first coding produced no F-ratios which were significant at the .01 probability level. However, two such values did occur for the second coding. Interestingly, the goals involved were Music Appreciation and Interest and Scientific Processes. In the case of Music Appreciation, schools which had a large percentage of Blacks rated this goal more important than did the schools which were heavily White or Mexican-American. In the case of Scientific Processes, the schools

which were heavily White gave much more importance to this area than did the Black or Mexican-American schools.

Professional background of the parents was used in an effort to get a handle on socio-economic status. Unfortunately, this variable which had eight groups varying in percentage composition of professional workers, white collar workers, blue collar workers, and unskilled workers showed only one F-ratio that was significant. The particular goal area was Scientific Approach. The mean showed a general tendency to decrease in size as the percentage of blue collar or unskilled laborers increased.

The last demographic variable which was investigated involved geographic region. This variable was defined so as to yield 5 groups based upon combinations of the nine regions of the country used by the U. S. Census Bureau. Once again there is only one significant F-ratio, this for the goal of Foreign Language Assimilation. This difference seems to be caused by the fact that although all the regions rate this goal fairly low, the eastern seaboard region rates it significantly less important than the rest of the country.

The surprising thing about the analysis of the influence of these demographic variables on the goal ratings is the lack of statistical significance. It would seem that these is little influence due to such demographic variables as geographic region, school size, or even racial composition. It would seem that only neighborhood type produced any consistent influence on the goal ratings. It cannot be due to a pure SES factor since professional background did not produce similar results. It would seem that a school should take into account the type of neighborhood it serves before using the results from the present sample.

SUMMARY

Based upon the comprehensive Q-sort approach to educational goal selection and priority placement that was developed at CSE and the previously described nation-wide sampling of principals from 49 elementary schools, teachers from 47 elementary schools, and parents from 44 elementary schools, comparisons were made over the various constituency and demographic groups in terms of their goal priorities.

Mean priority ratings were obtained for each sample of raters and for the total sample. Comparisons among the samples were investigated in order to see how the samples differ in values and where the largest value differences exist. Such information was deemed important for understanding the problems of communication among the various constituencies within a school and the reasons for characteristic group pressures. The findings indicate that there is great agreement in the priority values set among all three groups, but that slight variations in the priority orders reflect certain expectable characteristics of the constituents. Principals seem to have a broad view of student outputs, while teachers appear to be motivated by the desire for well-behaved students (understandable in terms of their daytime experiences), and parents seem to want the traditional subject-matter achievements that they themselves understand and were educated for.

In addition, the following demographic data were collected for each of the schools who participated in the national survey of needs: school-pupil population, size of community in which the school functions, racial-ethnic composition of the student body, socio-economic composition of the neighborhood served by the school, and the geographic region of the nation in which the school and community are located. These characteristics were all

analyzed with the findings of the priority ratings in order to determine characteristics giving rise to priority differences. Such characteristic differences, aside from their interesting nature, allow for a better estimation of goal priorities for any school without actually engaging in a needs-assessment evaluation.

Special attention was directed at the effects of the racial-ethnic, socio-economic, and geographic characteristics of the schools, as the findings would shed light upon potentially critical differences between locally perceived and nationally perceived educational needs. (Such differences must be known by local, state, and national policy makers if their policies are to reflect the best interests of the students.) Surprisingly these demographic variable seemed to have little influence on the priority ratings of the goals. It would seem therefore that the results of the overall priority ratings obtained from this sample might be expected to represent a general setting of priorities in this country.

Table 1

Percentage Composition of United States and Field Test Sample

Regions	% in Population	% in Sample
New England *Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut*	05.83	3.8%
Middle Atlantic *New York, New Jersey, Pennsylvania*	18.28	21.1%
East North Central *Ohio, Indiana, Illinois, Michigan Wisconsin*	19.81	13.4%
West North Central *Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas*	8.03	17.3%
South Atlantic *Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida*	15.09	13.4%
East South Central *Kentucky, Tennessee, Alabama, Mississippi*	6.30	3.8%
West South Central *Arkansas, Louisiana, Oklahoma, Texas*	9.50	7.6%
Mountain *Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada*	4.07	15.3%
Pacific *Washington, Oregon, California, Alaska, Hawaii*	13.05	3.8%

Table 2

Analysis of Variance on ratings of 41 goals
Principal vs. Teacher vs. Parent

		UNIVARIATE F	P LESS THAN
1.	Temperament - Personal	5.2278	0.0065
2.	Temperament - Social	3.5409	0.0317
3.	Attitudes	4.4621	0.0133
4.	Needs and Interests	1.2491	0.2900
5.	Valuing Arts and Crafts	1.4373	0.2411
6.	Producing Arts and Crafts	1.5614	0.2136
7.	Understanding Arts and Crafts	6.5193	0.0020
8.	Reasoning	1.1229	0.3283
9.	Creativity	0.4758	0.6225
10.	Memory	1.0661	0.3472
11.	Foreign Language Skills	39.7969	0.0001
12.	Foreign Language Assimilation	25.5055	0.0001
13.	Language Construction	0.8677	0.4223
14.	Reference Skills	1.6444	0.1969
15.	Arithmetic Concepts	1.4595	0.2360
16.	Arithmetic Operations	1.9098	0.1521
17.	Mathematical Applications	2.9470	0.0559
18.	Geometry	4.9694	0.0083
19.	Measurement	0.6995	0.4987
20.	Music Appreciation and Interest	4.1192	0.0184
21.	Music Performance	0.0286	0.9718
22.	Music Understanding	3.6417	0.0288
23.	Health and Safety	3.0674	0.0498
24.	Physical Skills	4.4569	0.0134
25.	Sportsmanship	0.8850	0.4152
26.	Physical Education	0.3066	0.7365
27.	Oral-Aural Skills	0.8686	0.4219
28.	Word Recognition	1.2951	0.2772
29.	Reading Mechanics	1.6837	0.1895
30.	Reading Comprehension	0.5459	0.5806
31.	Reading Interpretation	0.7645	0.4676
32.	Reading Appreciation and Response	3.1841	0.0445
33.	Religious Knowledge	19.9363	0.0001
34.	Religious Belief	8.6924	0.0003
35.	Scientific Processes	1.9575	0.1452
36.	Scientific Knowledge	0.5099	0.6017
37.	Scientific Approach	4.6172	0.0115
38.	History and Civics	4.6590	0.0111
39.	Geography	1.1138	0.3313
40.	Sociology	2.5666	0.0805
41.	Application of Social Studies	1.0720	0.3452

DEGREES OF FREEDOM FOR HYPOTHESIS = 2
DEGREES OF FREEDOM FOR ERROR = 137.

F-RATIO FOR MULTIVARIATE TEST OF EQUALITY OF MEAN VECTORS = 4.3541

D.F. = 82. AND 194.0000 P LESS THAN 0.0001

Table 3

Analysis of Variance on 106 Goals for Three Groups

Educational Goal	Univariate F	P Less Than
1. Shyness-Boldness	4.5300	0.0125
2. Neuroticism-Adjustment	6.1456	0.0028
3. General Activity-Lethargy	2.4978	0.0860
4. Dependence-Independence	3.0365	0.0513
5. Hostility-Friendliness	2.1975	0.1150
6. Socialization-Rebelliousness	0.2450	0.7831
7. School Orientation	13.1222	0.0001
8. Self-Esteem	1.3078	0.2738
9. Need Achievement	1.0545	0.3512
10. Interest Areas	0.3683	0.6926
11. Appreciation of Arts and Crafts	2.3902	0.0955
12. Involvement in Arts and Crafts	0.6058	0.5472
13. Representational Skill in Arts and Crafts	2.2165	0.1129
14. Expressive Skill in Arts and Crafts	4.2283	0.0166
15. Arts and Crafts Comprehension	6.1962	0.0027
16. Developmental Understanding of Arts and Crafts	1.8884	0.1553
17. Classificatory Reasoning	2.4722	0.0882
18. Relational-Implicational Reasoning	0.3444	0.7093
19. Systematic Reasoning	0.0876	0.9162
20. Spatial Reasoning	0.6578	0.5197
21. Creative Flexibility	0.4191	0.6585
22. Creative Fluency	4.9413	0.0085
23. Span and Serial Memory	2.0021	0.1390
24. Meaningful Memory	0.1492	0.8616
25. Spatial Memory	39.0674	0.0001
26. Reading Comprehension of a Foreign Language	29.9127	0.0001
27. Oral Comprehension of a Foreign Language	21.9361	0.0001
28. Speaking Fluency in a Foreign Language	24.4159	0.0001
29. Writing Fluency in a Foreign Language	3.3195	0.0391
30. Cultural Insight through a Foreign Language	23.0538	0.0001
31. Interest in and Application of a Foreign Lang.	1.4148	0.2465
32. Spelling	0.4180	0.6593

Table 3 (cont'd)

Educational Goal	Univariate F	P Less Than
33. Punctuation	1.2432	0.2917
34. Capitalization	1.3139	0.2721
35. Grammar and Usage	4.1460	0.0179
36. Penmanship	5.7003	0.0042
37. Written Expression	0.8540	0.4280
38. Independent Application of Writing Skill	1.3845	0.2539
39. Use of Data Sources as Reference Skill	1.4521	0.2377
40. Summarizing Information for Reference	3.0704	0.0497
41. Comprehension of Numbers and Sets in Mathematics	20.1309	0.0001
42. Comprehension of Positional Notation in Math.	0.3094	0.7345
43. Comprehension of Equations and Inequalities	1.4517	0.2378
44. Comprehension of Number Principles	4.7508	0.0102
45. Operations with Integers	0.3974	0.6729
46. Operations with Fractions	3.2129	0.0433
47. Operations with Decimals and Percents	2.5608	0.0810
48. Mathematical Problem Solving	1.4666	0.2343
49. Independent Application of Mathematical Skills	3.7962	0.0249
50. Geometric Facility	4.5138	0.0127
51. Geometric Vocabulary	5.0325	0.0078
52. Measurement Reading and Making	1.1913	0.3069
53. Statistics	1.2226	0.2977
54. Music Appreciation	1.6498	0.1959
55. Music Interest and Enjoyment	6.8992	0.0014
56. Singing	1.3133	0.2723
57. Musical Instrument Playing	5.8603	0.0037
58. Dance (Rhythmic Response)	2.1602	0.1192
59. Aural Identification of Music	2.8596	0.0608
60. Music Knowledge	2.6618	0.0735
61. Practicing Health and Safety Principles	8.4046	0.0004
62. Understanding Health and Safety Principles	0.3211	0.7260
63. Sex Education	0.6095	0.5452
64. Muscle Control (Physical Education)	3.9400	0.0217
65. Physical Development and Well-Being (Phys. Educ.)	2.9221	0.0572
66. Group Activity - Sportsmanship	0.5010	0.6071
67. Interest and Indepndt. Partcptn. in Sports & Games	1.4003	0.2500

Table 3 (cont'd)

Educational Goal		Univariate F	P Less Than
68.	Understndg. Rules and Strategies of Sports & Games	2.1975	0.1150
69.	Knowledge of Phys-Ed. Apparatus and Equipment	0.3794	0.6850
70.	Listening Reaction and Response to Reading	1.3277	0.2685
71.	Speaking	1.2312	0.2952
72.	Phonetic Recognition	0.7252	0.4861
73.	Structural Recognition	2.8535	0.0611
74.	Oral Reading	6.5975	0.0019
75.	Silent Reading Efficiency	2.2022	0.1145
76.	Recognition of Word Meanings	0.1380	0.8713
77.	Understanding Ideational Complexes	2.1759	0.1175
78.	Remembering Information Read	0.6309	0.5337
79.	Inference Making from Reading Selections	1.5825	0.2092
80.	Recognition of Literary Devices	2.3805	0.0963
81.	Critical Reading	3.5416	0.0317
82.	Attitude toward Reading	0.4235	0.6557
83.	Attitude and Behavior Modification from Reading	0.1190	0.8879
84.	Familiarity with Standard Children's Literature	9.2127	0.0002
85.	Religious Knowledge	20.2932	0.0001
86.	Religious Belief	8.8283	0.0003
87.	Observation and Description in Science	1.1727	0.3126
88.	Use of Numbers and Measures in Science	0.0000	1.0000
89.	Classification and Generalization in Science	1.2515	0.2893
90.	Hypothesis Formation in Science	4.3129	0.0153
91.	Operational Definitions in Science	0.4459	0.6412
92.	Experimentation in Science	4.0961	0.0188
93.	Formulation of Generalized Conclusions in Science	4.0475	0.0196
94.	Knowledge of Scientific Facts and Terminology	2.6245	0.0762
95.	The Nature and Purpose of Science	3.1968	0.0440
96.	Science Interest and Appreciation	1.7399	0.1794
97.	Application of Scientific Methods to Life	4.6205	0.0115
98.	Knowledge of History	6.6293	0.0018
99.	Knowledge of Governments	1.7982	0.1695
100.	Knowledge of Physical Geography	0.9453	0.3912

Table 3 (cont'd)

Educational Goal	Univariate F	P Less Than
101. Knowledge of Socio-Economic Geography	1.3555	0.2613
102. Cultural Knowledge	1.5838	0.2089
103. Social Organization Knowledge	2.7186	0.0696
104. Research Skills in Social Sciences	3.1665	0.0453
105. Citizenship	16.5756	0.0001
106. Interest in Social Studies	0.2008	0.8184

Table 4

Correlation of Mean Ratings on 41 Goals for Three Groups

	Principals	Teachers	Parents
Principals	1.00	.973	.916
Teachers	.973	1.00	.970
Parents	.916	.970	1.00

Correlation of Mean Rankings on 41 Goals for Three Groups

	Principals	Teachers	Parents
Principals	1.00	.964	.926
Teachers	.964	1.00	.974
Parents	.926	.974	1.00

Table 5

Correlation of Mean Ratings on 106 for the Three Groups

	Principals	Teachers	Parents
Principals	1.00	.985	.947
Teachers	.985	1.00	.974
Parents	.947	.974	1.00

Correlation of Mean Rankings on 106 for the Three Groups

	Principals	Teachers	Parents
Principals	1.00	.981	.947
Teachers	.981	1.00	.972
Parents	.947	.972	1.00

Table 6

F - ratio's for Demographic Variables on 41 Educational Goals

Educational Goal	School Size	Neighborhood Type	Increasing Minorities	White vs. Non-White	Professional Background	Geographic Region
1. Temperament: Personal	0.1766	.4574	.1533	.5590	1.3948	2.4167
2. Temperament: Social	0.3120	.4854	.3293	.4725	1.3376	.9475
3. Attitudes	0.9910	1.0844	1.0090	.9160	.5820	.4805
4. Needs and Interests	0.8783	1.1042	1.8349	1.4727	1.6217	.3360
5. Valuing Arts and Crafts	2.6062	.3739	.1193	2.1246	2.6238	.5773
6. Producing Arts and Crafts	.3300	.1887	.7241	1.6938	1.3493	.2114
7. Understanding Arts and Crafts	.5034	2.6310	2.3465	1.3710	.9573	1.8955
8. Reasoning	.7314	3.8689	2.6476	3.9671	.6866	1.8678
9. Creativity	1.0412	4.8794*	1.8871	2.8203	2.5061	1.1739
10. Memory	.3881	4.7521*	1.9407	3.0894	1.7878	2.0587
11. Foreign Language Skills	1.1866	.8915	1.1145	1.0636	.3496	1.3417
12. Foreign Language Assimilation	1.0738	1.5708	3.7892	2.0343	.6205	4.0681*
13. Language Construction	.4344	1.7995	1.2381	.5534	.5034	2.0981
14. Reference Skills	1.2883	.3474	2.0405	1.3262	1.4189	1.2231
15. Arithmetic Concepts	.7286	1.5814	.0216	2.8001	2.7460	1.6623
16. Arithmetic Operations	.4491	.6006	.6390	.3316	1.0732	2.1165
17. Mathematical Applications	3.3837	.5625	1.0063	1.8129	3.1040	1.4332
18. Geometry	4.6564*	1.8768	.1752	1.7417	.8680	.7800
19. Measurement	.4663	1.1008	1.0229	2.3592	2.5302	.5228
20. Music Appreciation & Interest	.7123	.1934	.2496	1.5651	1.3969	.3411
21. Music Performance	2.4121	1.0532	1.5732	4.7607*	1.4317	.6575
22. Music Understanding	.7691	1.3037	.3455	.3357	1.4027	.6604
23. Health and Safety	.1090	.1361	2.9088	.2291	1.2896	1.0034
24. Physical Skills	1.4157	.8073	.5213	.5965	2.9977	.1164
25. Sportsmanship	1.3016	2.0583	.5731	.4486	2.5976	1.0127
26. Physical Education	.1976	1.6799	.2404	.8716	1.1254	2.0115
27. Oral-Aural Skills	1.7539	.4285	3.7575	3.1469	.4597	1.4625
28. Word Recognition	.8216	1.8311	1.0873	.6327	1.0375	.4771
29. Reading Mechanics	.0119	1.4648	1.6248	1.0173	.9179	.7823
30. Reading Comprehension	2.1230	1.2973	1.1294	1.3893	.7121	.8555
31. Reading Interpretation	2.0812	5.7614*	2.9770	4.3118	1.8637	2.8405
32. Reading Appreciation & Response	.4265	2.3266	1.8194	1.4330	1.8696	.3220
33. Religious Knowledge	1.2370	3.0225	1.1130	1.7238	2.2744	.3633
34. Religious Belief	1.3281	1.9626	.4463	.1355	2.1402	.8859
35. Scientific Processes	3.7748	4.6220*	3.4949	6.4177*	2.2823	1.4678
36. Scientific Knowledge	1.3097	2.8113	1.3241	2.5909	1.2034	.9588
37. Scientific Approach	1.1492	2.5081	1.8164	2.1531	3.3904*	.4270
38. History and Civics	3.5538	.6879	2.0862	1.1725	2.1650	.8412
39. Geography	3.0431	1.5359	3.1898	1.6688	.8631	1.8690
40. Sociology	.4968	1.9526	2.5605	2.0298	1.7897	2.6600
41. Application of Social Studies	.0716	.1737	1.0394	.2191	1.5588	.8776

*Significance at .01 level.

Table 7

F-ratios for Demographic Variables on 106 Educational Goals

	Educational Goals	School Size	Neighborhood Types	Increasing Minorities	White vs. Non-white	Professional Background	Geographic Region
1.	Shyness-Boldness	1.5296	0.4341	0.0681	0.1680	1.1563	1.7964
2.	Neuroticism-Adjustment	0.3486	0.1101	0.3281	2.8691	0.8007	1.7682
3.	General Activity-Lethargy	0.0767	0.9213	0.6072	0.1486	1.0254	0.8110
4.	Dependence-Independence	1.8839	0.5632	0.4887	0.0988	0.9991	1.3418
5.	Hostility-Friendliness	0.0680	0.9905	1.1572	1.7655	1.2832	0.7045
6.	Socialization-Rebelliousness	0.2552	2.6531	0.7526	1.0181	0.7881	0.4467
7.	School Orientation	3.2596	0.4548	0.7032	0.7915	0.4036	1.9298
8.	Self-Esteem	0.1186	0.2169	0.7685	0.9010	0.7239	1.1613
9.	Need Achievement	1.9386	1.7453	2.4298	1.1703	2.3208	0.4579
10.	Interest Areas	4.2522	0.1474	0.2278	0.7557	1.9588	0.5365
11.	Appreciation of Arts and Crafts	0.9018	0.5949	0.6543	3.2866	2.5350	0.9286
12.	Involvement in Arts and Crafts	0.0258	1.1315	1.9861	3.1561	1.1220	0.6372
13.	Representational Skill in Arts and Crafts	0.6524	0.0633	0.1095	0.4944	1.7209	0.6129
14.	Expressive Skill in Arts and Crafts	0.8257	5.3966*	3.3471	2.5380	1.0011	1.7075
15.	Arts and Crafts Comprehension	0.1465	0.7231	0.8523	1.0377	0.7714	1.6085
16.	Developmental Understanding of Arts and Crafts	0.4153	2.1182	1.9394	2.8191	0.5764	2.1586
17.	Classificatory Reasoning	0.0709	3.0954	2.7086	3.5661	0.9627	2.2485
18.	Relational-Implicational Reasoning	1.6836	3.5483	1.7659	2.1373	1.8625	2.0360
19.	Systematic Reasoning	0.6169	1.7282	0.9138	1.4505	1.9551	0.9470
20.	Spatial Reasoning	1.8833	7.3056*	3.1272	4.3201	2.0930	1.3745
21.	Creative Flexibility	0.2787	1.9185	0.7919	0.9128	2.0293	0.7841

Table 7 (cont.)

Educational Goals	School Size	Neighbor-hood Types	Increasing Minorities	White vs. Non-white	Professional Background	Geographic Region
22. Creative Fluency	0.1880	3.5969	0.8387	1.8794	0.9119	0.5224
23. Span and Serial Memory	0.5862	1.2782	1.0712	0.6410	1.7130	1.4699
24. Meaningful Memory	0.7285	3.8399	2.7943	4.0437	4.6928*	2.8951
25. Spatial Memory	0.5770	0.3716	1.3483	0.9583	0.2540	2.0128
26. Reading Comprehension of a Foreign Language	0.9038	2.1916	2.1454	1.8733	1.0427	1.3057
27. Oral Comprehension of a Foreign Language	1.7757	0.6918	0.5154	0.1875	0.5878	1.2988
28. Speaking Fluency in a Foreign Language	0.3397	0.4252	1.3167	0.9567	0.6270	0.3887
29. Writing Fluency in a Foreign Language	0.1065	0.8368	0.1344	0.0569	1.4797	2.2409
30. Cultural Insight through a Foreign Language	2.3078	2.4375	3.2341	2.7591	0.9726	3.4791*
31. Interest in and Application of a Foreign Lang.	0.0012	2.9416	1.6188	1.8410	0.4814	0.7322
32. Spelling	0.1101	2.3675	1.3009	1.1260	0.8486	2.9202
33. Punctuation	0.2179	3.8313	1.4065	1.8248	0.8887	2.2764
34. Capitalization	0.3101	0.6805	1.2131	0.1628	0.5856	2.6769
35. Grammar and Usage	0.0114	2.9397	2.5318	1.1952	1.5628	2.9002
36. Penmanship	1.6886	0.8209	1.7620	2.6248	3.0675*	1.0568
37. Written Expression	2.7111	0.9496	1.0389	0.7578	0.7948	0.7032
38. Independent Application of Writing Skills	0.5102	0.9047	3.1273	1.3385	1.4868	0.9535
39. Use of Data Sources as Reference Skill	1.7642	0.5318	0.7914	1.1246	1.1296	1.0255
40. Summarizing Information for Reference	0.1629	1.4366	0.7094	2.5683	2.0134	1.6427
41. Comprehension of Numbers and Sets in Math.	0.3685	1.5095	3.3935	1.1255	0.5601	2.9926
42. Comprehension of Positional Notation in Math.	0.5512	1.9136	1.0303	1.9512	2.8051*	1.7212
43. Comprehension of Equalities & Inequalities	4.1561	2.1765	0.5574	2.4556	2.9809*	1.7672
44. Comprehension of Number Principles	2.0425	1.3018	0.1406	2.2942	1.6167	0.8539
45. Operations with Integers	0.5878	1.6531	1.7626	1.0993	1.8480	1.9524

Table 7 (cont'd)

Educational Goals	School Size	Neighbor-hood Types	Increasing Minorities	White vs. Non-white	Professional Background	Geographic Region
46. Operations with Fractions	0.3430	0.5383	0.8782	0.4720	0.5188	1.2743
47. Operations with Decimals and Percents	1.1462	0.8341	0.6518	0.5537	0.8729	1.7967
48. Mathematical Problem Solving	2.7670	0.7528	2.5196	4.1976	3.2043*	0.9269
49. Independent Application of Mathmatical Skills	2.3705	0.6693	0.2384	0.1070	1.7685	1.4277
50. Geometric Facility	5.1392*	1.8839	0.2775	2.8517	0.6848	0.2898
51. Geometric Vocabulary	4.2852	1.7435	0.2012	0.7571	1.2236	1.5332
52. Measurement Reading and Making	0.1718	0.2071	0.6070	0.5831	1.5074	2.7922
53. Statistics	1.5333	1.9663	1.4920	3.2993	2.5554	0.4038
54. Music Appreciation	1.4720	0.0299	0.3713	0.8942	1.0408	1.2956
55. Music Interest and Enjoyment	0.3588	0.7427	1.0154	2.4537	1.9872	0.7947
56. Singing	0.7973	0.9698	0.7693	2.0173	0.4115	0.1887
57. Musical Instrument Playing	6.4837	0.8434	2.5790	1.2800	2.4133	1.2484
58. Dance (Rhythmic Response)	1.2903	1.0634	1.6095	6.9948*	1.8077	2.1175
59. Aural Identification of Music	0.8429	0.6827	0.1703	2.2926	0.8784	0.3613
60. Music Knowledge	0.5266	1.6970	0.9009	0.2037	1.0852	1.2432
61. Practicing Health and Safety Principles	0.0202	1.8405	4.4753*	0.4080	1.1768	1.5214
62. Understanding Health and Safety Principles	0.0694	0.8547	3.2155	0.1832	0.2537	0.4248
63. Sex Education	0.4948	1.9684	0.3604	0.1414	1.4072	1.5711
64. Muscle Control (Physical Education)	1.9558	1.2088	0.3736	0.9630	2.3550	0.2657
65. Physical Development and Well-Being (Phys.Educ.)	0.4982	0.2238	0.9537	0.1425	2.6572	0.0419
66. Group Activity - Sportsmanship	0.3701	2.4895	0.3163	0.2656	1.0543	0.7051
67. Interest & Indepndt.Partcptn.in Sports & Games	2.0908	0.8276	0.9464	0.3687	2.8992*	1.8614
68. Undrstndg. Rules & Strategies of Sports & Games	0.0680	0.9905	1.1572	1.7655	1.2832	0.7045
69. Knowledge of Phys-Ed.Apparatus & Equipment	0.7059	1.2013	0.2398	1.3012	2.2684	2.9445
70. Listening Reaction and Response to Reading	3.4087	0.9264	3.3575	4.8871*	0.4397	2.4282

Table 7 (cont'd.)

Educational Goals	School Size	Neighborhood Types	Increasing Minorities	White vs. Non-white	Professional Background	Geographic Region
71. Speaking	0.4253	0.4960	2.4650	1.1604	0.8449	0.4863
72. Phonetic Recognition	0.8693	1.8695	1.5410	1.5249	1.7938	0.6821
73. Structural Recognition	0.6114	1.6348	0.7953	0.0948	0.3845	0.5300
74. Oral Reading	0.0265	1.2325	1.5845	1.9284	1.3964	1.6375
75. Silent Reading Efficiency	0.0052	1.3761	2.0159	0.1856	1.4832	0.7534
76. Recognition of Word Meanings	2.0415	0.1973	0.4491	0.3996	0.3985	1.1124
77. Understanding Ideational Complexes	1.6567	3.3169	3.3783	5.0193*	1.2446	1.9507
78. Remembering Information Read	0.7410	1.0963	0.1800	0.2757	1.1255	0.6467
79. Inference Making from Reading Selections	1.1135	4.0976*	0.8837	0.9912	1.1774	0.9389
80. Recognition of Literary Devices	2.4709	2.5601	3.8142	4.0772	1.2687	3.3198
81. Critical Reading	1.1448	5.8231*	2.2675	3.0051	1.6490	1.8503
82. Attitude toward Reading	1.3950	2.3283	0.5652	0.3350	1.5424	0.2456
83. Attitude and Behavior Modification from Reading	0.3984	2.6784	1.1210	1.9389	1.5075	0.9221
84. Familiarity with Standard Children's Literature	0.9504	0.9151	2.1538	0.7792	1.8895	0.6385
85. Religious Knowledge	1.2382	3.0242	1.1167	1.7271	2.2715	0.3654
86. Religious Belief	1.3338	1.9671	0.4483	0.1382	2.1441	0.8866
87. Observation and Description in Science	1.5301	0.7655	2.0042	3.1519	0.7921	0.5003
88. Use of Numbers and Measures in Science	1.3155	1.5109	2.3797	2.2360	1.3117	0.2451
89. Classification and Generalization in Science	4.2456	1.7249	3.4105	5.0979*	0.8951	1.3254
90. Hypothesis Formation in Science	3.1524	5.9188*	3.7068	4.9111*	3.7642*	2.9097
91. Operational Definitions in Science	1.9663	3.5063	0.8965	2.8730	0.9687	0.1570
92. Experimentation in Science	1.7277	3.9517	1.4165	3.2440	3.0576*	2.0585
93. Formulation of Generalized Conclusions in Science	3.5150	6.8219*	3.8372	6.5284*	2.4577	1.8163
94. Knowledge of Scientific Facts and Terminology	0.6956	1.4240	0.9107	1.3785	0.8662	1.0088
95. The Nature and Purpose of Science	1.4091	3.1418	1.4500	2.3783	1.2475	0.6589

Table 7 (cont'd.)

Educational Goals	School Size	Neighbor-hood Types	Increasing Minorities	White vs. Non-white	Professional Background	Geographic Region
96. Science Interest and Appreciation	2.6429	6.8343*	4.2125	6.2153*	4.3675*	0.4995
97. Application of Scientific Methods to Life	0.1800	0.8640	0.7118	0.4562	2.1597	0.9380
98. Knowledge of History	1.5402	0.1335	1.6892	1.5658	1.6083	0.5022
99. Knowledge of Governments	3.8418	1.5326	1.5251	0.3330	2.1146	1.1252
100. Knowledge of Physical Geography	2.8083	1.2953	1.9004	1.0728	1.1422	2.3776
101. Knowledge of Socio-Economic Geography	2.1331	1.3428	3.7188	1.9831	1.0518	1.2528
102. Cultural Knowledge	1.0240	1.6879	1.7482	1.5736	1.3771	2.4080
103. Social Organization Knowledge	0.1964	1.4794	3.0235	1.7034	2.3838	1.9788
104. Research Skills in Social Sciences	0.2673	1.3978	3.0978	3.3603	2.5169	0.8041
105. Citizenship	0.9812	0.1223	0.7151	0.4326	1.5055	0.2531
106. Interest in Social Studies	0.1607	0.1281	2.3687	2.8056	0.7338	2.1562